

age; this latter mentioned beds cover extensive area in the region south of Oga Peninsula. Thus it seems that the presence of fossils in the Japan Sea and especially if they really belong to the Daisyaka Shell-beds are important data in dealing with the history of the Japan Sea on the one hand and form a basis of interesting comparative study of the marine fauna which consists of both living and fossil animals.

THE OCCURRENCE OF TETHYS WILLCOXI IN NEW ENGLAND WATERS, AND ANOTHER RECORD FOR THIS LOCALITY

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Tethys willcoxi was originally described by Heilprin (1886) from Florida, and the members of this genus are most commonly found in tropical waters on the Atlantic coast. But there are occasional records of the species, *willcoxi*, from New England. These records are, however, comparatively rare, and in most cases consist of only one specimen. This fact indicates that the species can hardly be considered indigenous to that section of the coast, and it is more likely that its infrequent occurrence in the region is best accounted for by the proximity of the Gulf Stream. Thus in the Woods Hole and Marthas Vineyard area, where this current passes close by, and on which it may encroach more at certain seasons and in different years than in others, are found various tropical organisms which are completely out of their usual range and yet are carried there or materially assisted in their progress by the Gulf Stream. Tropical forms in northern waters but some distance away from the Woods Hole region are more difficult to account for. It must be assumed that individuals of this kind reached these latitudes with the aid of the Gulf Stream, and that they then migrated by themselves through abnormally cold waters or were perhaps helped along by smaller currents, so that they eventually arrived in such a locality. The present record for *Tethys willcoxi* is one of the few which belongs to this latter type.

Accounts of *Tethys willcoxi* in northern waters from the Woods Hole region are summarized by Sumner, Osburn, and Cole (1911) as follows:

“Katama Bay, October 31, 1900, 1 large specimen. . . . Buzzards Bay, near Woods Hole, October 11, 1906, 1 specimen (probably of this species) taken in a lobster-pot. During October, 1910, this mollusk was taken rather frequently throughout the waters of the region, one or more specimens being recorded from New Bedford, Westport, Buzzards Bay (near Woods Hole), Lamberts Cove, Tarpaulin Cove, Robinsons Hole, and Menemsha Bight. . . .”

Records from northern waters but *not* in the immediate vicinity of Woods Hole are much more rare. Sanford (1922) mentions one from Narragansett, R. I., in October, and Dr. Wesley R. Coe deposited in the Peabody Museum at Yale University a single specimen (No. 4755) sent to him from Plum Island, N. Y.; this individual was taken in October, 1921.

It is noteworthy that all the records of *Tethys willcoxi* in these latitudes are in October, and the present capture of this species is no exception. On October 25, 1936, the author was at Newport in connection with an investigation of the striped bass for the Connecticut State Board of Fisheries and Game. A specimen of *Tethys willcoxi* was taken at this time from one of Mr. Clifton L. Tallman's large floating fish traps which was located less than a mile offshore from the rocks east of Bailey's Beach.

The individual was a dark brown all over while alive, and it emitted large quantities of the typical Tyrean purple fluid from its mantle. After it had been preserved in formalin for a short while the purple fluid changed to a reddish hue, and the animal began to lose the coloration it had in life. The “greenish” tints and “coarsely cloud-marbled” condition described by Pilsbry (1896) had appeared in three weeks. At this time the foot had turned noticeably lighter, while the edges of the pleuropodia or swimming-lobes, part of the mantle, and the head region were definitely olive-green. The inside of the pleuropodia retained their original dark coloration, with a distinct purple tint which probably came from the fluid the animal emitted while still alive.

The size of the specimen—measurements taken three weeks after preservation—was as follows: length, 10 cms.; height, 7.3 cms.; width, 6 cms. The shell was 56 mm. long and 43 mm. wide.

This individual has been given to the Bingham Oceanographic Laboratory, and is deposited in the Peabody Museum at Yale University.

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THE WEST VIRGINIAN PUPILLIDAE IN THE CARNEGIE MUSEUM

BY STANLEY TRUMAN BROOKS

Through the collections of Mr. Gordon M. Kutchka, of this laboratory, Mr. Neil D. Richmond, of Fairmont, Professor G. R. Hunt, Fairmont Teachers College, Professor M. S. Briscoe, Storer College, Harpers Ferry, and Mr. Paul Ridgeway, Ridgeway, West Virginia, 199 records have been added to the list published by me in March, 1935 (Annals of the Carnegie Museum, Vol. XXIV, pp. 61–68). Among these one new species was found and described (l.c. Vol. XXV, p. 121) and 18 species and two genera new to the state were added.

The collections were mainly from siftings of forest loam and debris. Fifty large samples were collected by Mr. Kutchka and ten by Mr. Richmond. Mr. Hunt and Mr. Briscoe made their own collections and submitted the cleaned specimens. All in all our collecting has been quite exhaustive in the areas studied, but many of the western counties remain to be investigated. Additional records or siftings from other collectors are welcome.